



State of Utah

Department of  
Environmental Quality

Dianne R. Nielson, Ph.D.  
*Executive Director*

DIVISION OF AIR QUALITY  
Richard W. Sprott  
*Director*

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*Governor*

GAYLE F. McKEACHNIE  
*Lieutenant Governor*

DAQE-IN0122032-04

August 25, 2004

Jeff Utley  
Flying J Incorporated  
Big West Oil Company  
333 West Center  
North Salt Lake City, Utah 84054

Dear Mr. Utley:

Re: Intent to Approve: Modification of Approval Order Adding Ethanol Storage Tank,  
Davis County – CDS: A., Maintenance; NSPS, HAPs; Title V Major  
Project Code: N0122-032

The attached document is the Intent to Approve (ITA) for the above-referenced project. ITAs are subject to public review. Any comments received shall be considered before an Approval Order is issued.

Future correspondence on this Intent to Approve should include the engineer's name as well as the DAQE number as shown on the upper right-hand corner of this letter. Please direct any technical questions you may have on this project to Mr. Mike Beheshti. He may be reached at (801) 536-4069.

Sincerely,

Rusty Ruby, Manager  
New Source Review Section

RR:MB:re

cc: Davis County Health Department  
Mike Owens, EPA Region VIII

**STATE OF UTAH**

**Department of Environmental Quality**

**Division of Air Quality**

**INTENT TO APPROVE: Modification of Approval Order  
Adding Ethanol Storage Tank**

**Prepared By: Mike Beheshti, Engineer  
(801) 536-4069  
Email: mbeheshti@utah.gov**

**INTENT TO APPROVE NUMBER**

**DAQE-IN0122032-04**

**Date: August 25, 2004**

**Flying J Incorporated  
Source Contact  
Brett Jenkins  
(801) 296-7700**

**Richard W. Sprott  
Executive Secretary  
Utah Air Quality Board**

## *Abstract*

*Big West Oil, LLC, [BWO] has submitted two notices of intent (NOI). One NOI requests approval to install a tank to store ethanol, a non-HAP alcohol. The second NOI states BWO's plan to rebuild the existing naphtha storage tank – Tank # 56 – and enlarge it from a capacity of 3000 barrels to a capacity of 7,250 barrels.*

*The ethanol tank will have a capacity of 7,250 barrels (40,705.73 cubic feet, equivalent to 304,500 gallons.) Blending of ethanol with gasoline takes place between October and April before shipping the blended gasoline to Las Vegas, which requires oxygenated gasoline during high ozone seasons. The rest of the time ethanol remains in the tank in repose.*

*The ethanol Tank's specification are: Diameter = 36 feet; height = 40 feet. Design meets the requirements of 40 CFR 60, Subpart Kb: internal floating roof and mechanical shoe. The design satisfies BACT. Ethanol emission from the tank is calculated at 400 pounds per year.*

*The rebuilt Tank #56 will also have an internal floating roof that includes a mechanical shoe. It complies with 40 CFR 60, Subpart Kb, and 40 CFR 63, Subpart CC – the Refinery MACT.*

*The naphtha emission from the rebuilt and enlarged tank will increase from 1.36 tons/yr to 1.53 tons/yr - an increase of 0.17 tpy. HAPs will increase by 15 lb/yr.*

*Approval Order DAQE-AN122024-02, dated December 4, 2002, is revised to include the specified changes.*

*Flying J's refinery is located in Davis County. As Flying J is listed in the Salt Lake County portion of the PM<sub>10</sub> SIP, it is defined as influencing the Salt Lake County PM<sub>10</sub> non-attainment area. Davis County is also a maintenance area for ozone. New Source Performance Standards (NSPS), National Emission Standards for Hazardous Air Pollutants (NESHAP) apply to this source. Title V of the 1990 Clean Air Act applies to this source. 30 days for public comments are required before the AO is issued.*

The Notice of Intent (NOI) for the above-referenced project has been evaluated and has been found to be consistent with the requirements of the Utah Administrative Code Rule 307 (UAC R307). Air pollution producing sources and/or their air control facilities may not be constructed, installed, established, or modified prior to the issuance of an Approval Order (AO) by the Executive Secretary of the Utah Air Quality Board.

A 30-day public comment period will be held in accordance with UAC R307-401-4. A notice of intent to approve will be published in the Salt Lake Tribune and Deseret News on August 28, 2004. During the public comment period the proposal and the evaluation of its impact on air quality will be available for both you and the public to review and comment. If anyone so requests a public hearing it will be held in accordance with UAC R307-401-4. The hearing will be held as close as practicable to the location of the source. Any comments received during the public comment period and the hearing will be evaluated.

Please review the proposed AO conditions during this period and make any comments you may have. The proposed conditions of the AO may be changed as a result of the comments received. Unless changed, the AO will be based upon the following conditions:

**General Conditions:**

1. This Approval Order (AO) applies to the following company:

Big West Oil Company, a subsidiary of Flying J, Inc.  
333 West Center Street  
North Salt Lake, Utah 84054  
Phone: (801) 296-7700  
FAX: (801) 296-7800

The equipment listed in this AO shall be operated at the following location:

Flying J Refinery  
333 West Center Street  
North Salt Lake, Utah 84054

Universal Transverse Mercator (UTM) Coordinate System: UTM Datum NAD27  
4,535.4 km Northing; 431.5 km Easting; Zone 12

2. All definitions, terms, abbreviations, and references used in this AO conform to those used in the Utah Administrative Code (UAC) Rule 307 (R307) and Title 40 of the Code of Federal Regulations (40 CFR). Unless noted otherwise, references cited in these AO conditions refer to those rules.
3. The limits set forth in this AO shall not be exceeded without prior approval in accordance with R307-401.
4. Modifications to the equipment or processes approved by this AO that could affect the emissions covered by this AO must be reviewed and approved in accordance with R307-401-1.
5. All records referenced in this AO or in applicable NSPS, which are required to be kept by the owner/operator, shall be made available to the Executive Secretary or Executive Secretary's representative upon request, and the records shall include the two-year period prior to the date of the request. Records shall be kept for the following minimum periods:
  - A. Emission inventories Five years from the due date of each emission statement, or until the next inventory is due, whichever is longer.
  - B. All other records Two years
6. Flying J, Inc./Big West Oil Company shall rebuild and install Tank 56 [new capacity = 7,250 barrels] for naphtha storage. It shall also install and construct an ethanol storage tank with a capacity of 7,250 barrels. Flying J shall operate and maintain these tanks in accordance with the requirements of this AO, which are written pursuant to Flying J/Big West Oil's Notices of Intent, submitted to the Division of Air Quality on July 27 and August 11, 2004.

7. This AO shall replace the AO -AN122024-02 dated December 4, 2002.
8. The approved installations shall consist of the following equipment:
  - A. Wastewater Storage Tank 7 -- 40,000 bbl capacity equipped with an internal floating roof
  - B. Petroleum Liquid Storage Tank 19 -- 20,000 bbl capacity
  - C. One (1) internal floating roof storage tank with a capacity of 40,000 barrels (Tank 45)
  - D. One (1) vertical fixed roof storage tank with a capacity of 40,000 barrels (Tank 29)
  - E. Rebuilt Tank 56 to a capacity of 7,250 barrels [diameter = 36 feet; height 40 feet]\*
  - F. Install a tank with a capacity of 7,250 barrels [diameter = 36 feet; height = 40 feet.]\*

\* New equipment

9. Flying J, Inc./Big West Oil shall notify the Executive Secretary in writing when the construction of the equipment listed in Condition #8.E&F has been completed and are operational, as an initial compliance inspection is required. To insure proper credit when notifying the Executive Secretary, send your correspondence to the Executive Secretary, attn: Compliance Section.

If construction has not been completed within eighteen months from the date of this AO, the Executive Secretary shall be notified in writing on the status of the construction. At that time, the Executive Secretary shall require documentation of the continuous construction of the operation and may revoke the AO in accordance with R307-401-11.

#### **Limitations and Tests Procedures**

10. The following true vapor pressures (TVP) shall not be exceeded:
  - A. 20.7 kPa (3 psia) for Tank 7
  - B. 4.8 kPa (0.7 psia) for Tank 19
  - C. 10.0 psia for Tank 45
  - D. 0.2 psia for Tank 29
  - E. 11.1 psia for Tank 56
  - F. 2.0 psia for Tank 87 [Ethanol tank]

Compliance with the TVP shall be determined by maintaining monthly records of the type and maximum TVP of material stored in each tank for all periods when the plant is in operation.

### **Federal Limitations and Requirements**

11. In addition to the requirements of this AO, all provisions of 40 CFR 60, New Source Performance Standards (NSPS) Subparts A and Kb, 40 CFR 60.1 to 60.18 and 40 CFR 60.110b to 60.117b (Standards of Performance for Volatile Organic Liquid Storage Vessels (Including Petroleum Liquid Storage Vessels) for which construction, reconstruction, or modification commenced after July 23, 1984) apply to Tanks 7, 45, 29 19. 56, and the ethanol tank. To be in compliance, this facility must operate in accordance with the most current versions of 40 CFR 60 and 40 CFR 63.

Tanks 7, 45, 56, and 87 [ethanol tank] shall be equipped with an internal floating roof. The owner/operator shall comply with the requirements as listed in Section 60.112b(a)(1).

### **Volatile Organic Compound (VOC) and Hazardous Air Pollutants (HAPs) Limitations**

12. The facility shall abide by all applicable requirements of R307-325 through R307-341 for VOC sources located in ozone Maintenance areas. At a minimum, Reasonable Available Control Technology (RACT) control measures are required and Best Available Control Technology (BACT) will be no less stringent than RACT. To be in compliance, this facility must operate in accordance with the most current version of R307-325 through R307-341 or the applicable section(s), if renumbered.
13. The combined VOC emissions from tanks listed in this AO shall not exceed:

#### **15.86 tons per rolling 12-month period**

The VOC emitted to the atmosphere shall be calculated using EPA approved methodologies on a monthly basis. Compliance with the limitation shall be determined on a rolling 12-month total. Based on the first day of each month a new 12-month total shall be calculated using data from the previous 12 months. Records of VOC emissions shall be kept for all periods when the plant is in operation.

### **Records & Miscellaneous**

14. At all times, including periods of startup, shutdown, and malfunction, owners and operators shall, to the extent practicable, maintain and operate any equipment approved under this Approval Order including associated air pollution control equipment in a manner consistent with good air pollution control practice for minimizing emissions. Determination of whether acceptable operating and maintenance procedures are being used will be based on information available to the Executive Secretary which may include, but is not limited to, monitoring results, opacity observations, review of operating and maintenance procedures, and inspection of the source. All maintenance performed on equipment authorized by this AO shall be recorded.
15. The owner/operator shall comply with R307-150 Series. Inventories, Testing and Monitoring.
16. The owner/operator shall comply with R307-107. General Requirements: Unavoidable Breakdowns.

The Executive Secretary shall be notified in writing if the company is sold or changes its name.

This AO in no way releases the owner or operator from any liability for compliance with all other applicable federal, state, and local regulations including R307.

A copy of the rules, regulations and/or attachments addressed in this AO may be obtained by contacting the Division of Air Quality. The Utah Administrative Code R307 rules used by DAQ, the Notice of Intent (NOI) guide, and other air quality documents and forms may also be obtained on the Internet at the following web site: <http://www.airquality.Utah.gov>

The annual emission estimations below include VOC emissions for the six storage tanks and HAPs emissions for Tanks 56, 45, and 29. These emissions are for the purpose of determining the applicability of Prevention of Significant Deterioration, non-attainment area, maintenance area, and Title V source requirements of the R307.

The Potential To Emit (PTE) emissions for the storage tanks (Tanks 7, 19, 29, 45, 56, and 87) are currently calculated at the following values:

<u>Pollutant</u>	<u>Tons/yr</u>
VOC .....	15.86

The HAPs from Tanks 29, 45, and 56 are estimated in pounds per year.

n-Hexane.....	227
Cyclohexane .....	126
Xylene.....	140
Toluene .....	141
Benzene .....	81
All others .....	140
Total HAPs.....	855 pounds per year.

The Division of Air Quality is authorized to charge a fee for reimbursement of the actual costs incurred in the issuance of an AO. An invoice will follow upon issuance of the final Approval Order.

Sincerely,

Rusty Ruby, Manager  
New Source Review Section